

## AMENDMENTS TO THE CLAIMS

Please amend the claims of the present application as set forth below. More specifically, a detailed listing of all claims has been provided. This listing of claims will replace all prior versions and listings of claims in the application. Changes to the claims are shown by strikethrough or double brackets (for deleted matter) and underlining (for added matter).

By way of overview, claims 1-49 are currently pending. The status of the pending claims is indicated below:

- a) Claims 1-3, 5, 6, 8-12, 14-17, 19-26, and 28-31 are original;
- b) Claims 4, 7, 13, 18, 27, and 32-34 previously presented; and
- c) Claims 35-49 are new.

## **Listing of Claims**

1. (Original) A computer system user interface for statistical analysis comprising:
  - a data entry display screen configured to receive user input providing tabular data;
  - a configuration and control display screen configured to receive user input selecting a particular statistical analysis to be performed on the tabular data;

statistical computation means responsive to user input received in the configuration and control display screen to perform the particular statistical analysis using the tabular data entered by user input in the data entry display screen to generate statistical results wherein the statistical computation means is operable to retrieve and reformat the tabular data without user interaction; and

a results page display screen responsive to the statistical computation means and to user input received in the configuration and control display screen to format and display results of the statistical analysis.

1  
2 2. (Original) The user interface of claim 1 wherein the statistical computation  
3 means includes:

4 means for computing the particular statistical analysis as one or more of: mean of  
5 the response, median of a function response, standard deviation of a function response,  
6 1st and 3rd quartile of a function response, stability factor of a function response,  
7 percentiles of a function response, percentile span of a function response, mean of the  
8 response using weighted data, median of the response using weighted data, standard  
9 deviation of the response using weighted data, 1st and 3rd quartile of the response using  
10 weighted data, stability factor of the response using weighted data, percentiles of the  
11 response using weighted data, percentile span of the response using weighted data, mean  
12 of the response for the top N elements, median of a function response for the top N  
13 elements, standard deviation of a function response for the top N elements, 1st and 3rd  
14 quartile of a function response for the top N elements, stability factor of a function  
15 response for the top N elements, percentiles of a function response for the top N  
16 elements, percentile span of a function response for the top N elements, mean of the  
17 response using weighted data for the top N elements, median of the response using  
18 weighted data for the top N elements, standard deviation of the response using weighted  
19 data for the top N elements, 1st and 3rd quartile of the response using weighted data for  
20 the top N elements, stability factor of the response using weighted data for the top N  
21 elements, percentiles of the response using weighted data for the top N elements, and  
22 percentile span of the response using weighted data for the top N elements.

23  
24 3. (Original) The user interface of claim 1 further comprising:  
25

1       a data store associated with the data entry display screen for persistent storage of  
2 the tabular data,

3       wherein the statistical analysis computation means is operable to retrieve the  
4 tabular data from the data store.

5

6       4. (Previously presented) A method comprising:  
7       receiving user input identifying desired analysis;  
8       retrieving user data from a data store;  
9       reformatting the user data in accordance with the desired analysis;  
10      computing factors for the desired analysis;  
11      formatting output from results of the computation for presentation to the user; and  
12      presenting the output to the user in response to input from the user requesting  
13      output presentation,

14       wherein the steps of retrieving, reformatting, computing and formatting are  
15      automated, responsive to the step of receiving and otherwise substantially devoid of  
16      interaction with the user for receiving input.

17

18       5. (Original) The method of claim 4 further comprising:  
19       receiving user input to enter the user data in a tabular format in advance of the  
20      step of receiving user input identifying desired analysis.

21

22       6. (Original) The method of claim 5 further comprising:  
23       transferring the user data entered in tabular format to a database.

1       7. (Previously presented) The method of claim 6 wherein the step of reformatting  
2 comprises:

3           retrieving the user data from the database such that the user data is in a different  
4 format than the tabular format.

5

6       8. (Original) The method of claim 4 wherein the step of receiving comprises:

7           receiving user input identifying the desired analysis as one or more of: mean of  
8 the response, median of a function response, standard deviation of a function response,  
9 1st and 3rd quartile of a function response, stability factor of a function response,  
10 percentiles of a function response, percentile span of a function response, mean of the  
11 response using weighted data, median of the response using weighted data, standard  
12 deviation of the response using weighted data, 1st and 3rd quartile of the response using  
13 weighted data, stability factor of the response using weighted data, percentiles of the  
14 response using weighted data, percentile span of the response using weighted data, mean  
15 of the response for the top N elements, median of a function response for the top N  
16 elements, standard deviation of a function response for the top N elements, 1st and 3rd  
17 quartile of a function response for the top N elements, stability factor of a function  
18 response for the top N elements, percentiles of a function response for the top N  
19 elements, percentile span of a function response for the top N elements, mean of the  
20 response using weighted data for the top N elements, median of the response using  
21 weighted data for the top N elements, standard deviation of the response using weighted  
22 data for the top N elements, 1st and 3rd quartile of the response using weighted data for  
23 the top N elements, stability factor of the response using weighted data for the top N  
24 elements, percentiles of the response using weighted data for the top N elements, and  
25 percentile span of the response using weighted data for the top N elements.

1  
2 9. (Original) A method comprising:

3 presenting a spreadsheet to a user on a display wherein the spreadsheet comprises  
4 a plurality of pre-defined pages;

5 receiving tabular data in a canonical form into a data page of the plurality of pre-  
6 defined pages;

7 receiving configuration input into a user interaction page of the plurality of pre-  
8 defined pages wherein the configuration input indicates a type of statistical analysis to be  
9 performed and indication of elements involved in the statistical analysis;

10 automatically reformatting the tabular data in accord with the type of statistical  
11 analysis without further user interaction;

12 automatically performing the indicated statistical analysis for all indicated  
13 elements without further interaction wherein the statistical analysis identifies a significant  
14 factor in the tabular data; and

15 generating results of the statistical analysis in a result page of the plurality of pre-  
16 defined pages wherein the results identify the significant factor.

17  
18 10. (Original) The method of claim 9 wherein the step of receiving configuration  
19 information comprises:

20 receiving user input identifying portions of the tabular data representing elements  
21 for the statistical analysis and user input identifying portions of the tabular data  
22 representing a response for the statistical analysis.

23  
24 11. (Original) The method of claim 10 wherein the step of receiving configuration  
25 input further comprises:

1 receiving user input as the configuration input identifying the type of statistical  
2 analysis as one or more of: mean of the response, median of the response, standard  
3 deviation of the response, 1st and 3rd quartile of the response, stability factor of the  
4 response, percentiles of the response, and percentile span of the response.

5  
6 12. (Original) The method of claim 9 wherein the step of generating results  
7 comprises:

8 generating results as tabular output in the results page.

9  
10 13. (Previously presented) The method of claim 9 wherein the step of generating  
11 results comprises:

12 generating results as graphical output in the results page.

13  
14 14. (Original) The method of claim 9 wherein the step of receiving configuration  
15 input comprises:

16 receiving user input identifying relevant elements within the tabular data and a  
17 corresponding response within the tabular data.

18  
19 15. (Original) The method of claim 14 wherein the step of performing the  
20 statistical analysis comprises:

21 determining a difference between the mean of a studied element of said relevant  
22 elements and all other elements of said relevant elements to determine significance of the  
23 studied element.

1       16. (Original) The method of claim 14 wherein the step of performing the  
2       statistical analysis comprises:

3           determining a difference between a standard deviation of a studied element of said  
4       relevant elements and all other elements of said relevant elements to determine  
5       significance of the studied element.

6

7       17. (Original) The method of claim 14 wherein the step of performing the  
8       statistical analysis comprises:

9           determining a difference between percentiles of a studied element of said relevant  
10      elements and all other elements of said relevant elements to determine significance of the  
11      studied element.

12

13       18. (Previously presented) A computer readable storage medium tangibly  
14      embodying program instructions for a method, the method comprising:

15           receiving user input identifying desired analysis;

16           retrieving user data from a data store;

17           reformatting the user data in accordance with the desired analysis;

18           computing factors for the desired analysis;

19           formatting output from results of the computation for presentation to the user; and

20           presenting the output to the user in response to input from the user requesting  
21      output presentation,

22           wherein the method steps of retrieving, reformatting, computing and formatting  
23      are automated, responsive to the method step of receiving and otherwise substantially  
24      devoid of interaction with the user for receiving input.

25

1           19. (Original) The medium of claim 18 further comprising:  
2           receiving user input to enter the user data in a tabular format in advance of the  
3           method step of receiving user input identifying desired analysis.

4

5           20. (Original) The medium of claim 19 further comprising: transferring the user  
6           data entered in tabular format to a database.

7

8           21. (Original) The medium of claim 20 wherein the method step of reformatting  
9           comprises:

10           retrieving the user data from the database such that the user data is in a different  
11           format than the tabular format.

12

13           22. (Original) The medium of claim 18 wherein the method step of receiving  
14           comprises:

15           receiving user input identifying the desired analysis as one or more of: mean of  
16           the response, median of a function response, standard deviation of a function response,  
17           1st and 3rd quartile of a function response, stability factor of a function response,  
18           percentiles of a function response, percentile span of a function response, mean of the  
19           response using weighted data, median of the response using weighted data, standard  
20           deviation of the response using weighted data, 1st and 3rd quartile of the response using  
21           weighted data, stability factor of the response using weighted data, percentiles of the  
22           response using weighted data, percentile span of the response using weighted data, mean  
23           of the response for the top N elements, median of a function response for the top N  
24           elements, standard deviation of a function response for the top N elements, 1st and 3rd  
25           quartile of a function response for the top N elements, stability factor of a function

1 response for the top N elements, percentiles of a function response for the top N  
2 elements, percentile span of a function response for the top N elements, mean of the  
3 response using weighted data for the top N elements, median of the response using  
4 weighted data for the top N elements, standard deviation of the response using weighted  
5 data for the top N elements, 1st and 3rd quartile of the response using weighted data for  
6 the top N elements, stability factor of the response using weighted data for the top N  
7 elements, percentiles of the response using weighted data for the top N elements, and  
8 percentile span of the response using weighted data for the top N elements.

9  
10 23. (Original) A computer readable storage medium tangibly embodying program  
11 instructions for a method, the method comprising:

12 presenting a spreadsheet to a user on a display wherein the spreadsheet comprises  
13 a plurality of pre-defined pages;

14 receiving tabular data in a canonical form into a data page of the plurality of pre-  
15 defined pages;

16 receiving configuration input into a user interaction page of the plurality of pre-  
17 defined pages wherein the configuration input indicates a type of statistical analysis to be  
18 performed and indication of elements involved in the statistical analysis;

19 automatically reformatting the tabular data in accord with the type of statistical  
20 analysis without further user interaction;

21 automatically performing the indicated statistical analysis for all indicated  
22 elements without further interaction wherein the statistical analysis identifies a significant  
23 factor in the tabular data; and

24 generating results of the statistical analysis in a result page of the plurality of pre-  
25 defined pages wherein the results identify the significant factor.

1        24. (Original) The medium of claim 23 wherein the method step of receiving  
2 configuration information comprises:

3            receiving user input identifying portions of the tabular data representing elements  
4 for the statistical analysis and user input identifying portions of the tabular data  
5 representing a response for the statistical analysis.

6

7        25. (Original) The medium of claim 24 wherein the method step of receiving  
8 configuration input further comprises:

9            receiving user input as the configuration input identifying the type of statistical  
10 analysis as one or more of: mean of the response, median of the response, standard  
11 deviation of the response, 1st and 3rd quartile of the response, stability factor of the  
12 response, percentiles of the response, and percentile span of the response.

13

14        26. (Original) The medium of claim 23 wherein the method step of generating  
15 results comprises:

16            generating results as tabular output in the results page.

17

18        27. (Previously presented) The medium of claim 23 wherein the method step of  
19 generating results comprises:

20            generating results as graphical output in the results page.

21

22        28. (Original) The medium of claim 23 wherein the method step of receiving  
23 configuration input comprises:

24            receiving user input identifying relevant elements within the tabular data and a  
25 corresponding response within the tabular data.

1  
2  
3        29. (Original) The medium of claim 28 wherein the method step of performing the  
4        statistical analysis comprises:

5                determining a difference between the mean of a studied element of said relevant  
6        elements and all other elements of said relevant elements to determine significance of the  
7        studied element.

8  
9        30. (Original) The medium of claim 28 wherein the method step of performing the  
10        statistical analysis comprises:

11                determining a difference between a standard deviation of a studied element of said  
12        relevant elements and all other elements of said relevant elements to determine  
13        significance of the studied element.

14  
15        31. (Original) The medium of claim 28 wherein the method step of performing the  
16        statistical analysis comprises:

17                determining a difference between percentiles of a studied element of said relevant  
18        elements and all other elements of said relevant elements to determine significance of the  
19        studied element.

20  
21        32. (Previously presented) The user interface of claim 1 wherein the statistical  
22        analysis is configured to find at least one statistically significant factor affecting a given  
23        response within the user input data.

1       33. (Previously presented) The method of claim 4 wherein the computing of  
2 factors for the desired analysis comprises finding statistically significant factors affecting  
3 a given response within the user data.

4

5       34. (Previously presented) The medium of claim 18 wherein the computing of  
6 factors for the desired analysis comprises finding statistically significant factors affecting  
7 a given response within the user data.

8

9       35. (New) A method comprising:  
10       receiving data through a data entry display mechanism;  
11       receiving configuration input through a configuration and control display  
12 mechanism, wherein the configuration input indicates:  
13       a type of statistical analysis to be performed; and  
14       an indication of factor-type X elements and at least one response-type Y  
15       element associated with the received data;  
16       performing the indicated statistical analysis for all indicated elements, wherein the  
17       statistical analysis identifies a significant factor among the indicated factor-type X  
18       elements with respect to said at least one identified response-type Y element; and  
19       generating results of the statistical analysis, wherein the results identify the  
20       significant factor.

21

22       36. (New) The method of claim 35 wherein the receiving an indication of factor-  
23       type X elements and said at least one response-type Y elements comprises indicating  
24       respective types of the elements within a tabular display of the elements.

1  
2       37. (New) The method of claim 35 wherein the receiving of the configuration  
3       input further comprises:

4           5 receiving an instruction that governs processing to identify significant factors  
5       from among identified response-type X elements with respect to an identified response-  
6       type Y element, the instruction comprising one of:

7           8       an instruction to identify main effects of various factors on the identified  
9       response-type Y element;

10           11       an instruction to identify a specified order of all effects; and

12           13       an instruction to identify all orders of effects.

14       38. (New) The method of claim 35 wherein the receiving of the configuration  
15       input further comprises:

16           17       receiving an instruction to standardize an identified factor-type Y element by  
18       removing an effect of an identified factor-type X element on the identified response-type  
19       Y element.

20       39. (New) The method of claim 35 wherein the receiving of the configuration  
21       input further comprises:

22           23       receiving an instruction to categorize an identified factor-type X element into a  
24       discrete range of values of the factor-type X element.

25       40. (New) The method of claim 35 wherein the receiving of the configuration  
input further comprises:

1 identifying an X level associated with a desired level of interaction analysis for an  
2 identified factor-type X element.

3  
4 41. (New) The method of claim 35 wherein the receiving of the configuration  
5 input further comprises:

6 identifying a type of statistical measure response represented by an identified  
7 response-type Y element, the type of statistical measure response defining the type of  
8 statistical analysis to be performed.

9  
10 42. (New) The method of claim 35 wherein the receiving of the configuration  
11 input further comprises:

12 identifying a filter that limits values analyzed for an identified factor-type X  
13 element.

14  
15 43. (New) The method of claim 35 wherein the receiving of the configuration  
16 input further comprises:

17 identifying N top levels to be included in the statistical analysis for an identified  
18 factor-type X element.

19  
20 44. (New) The method of claim 35 wherein the receiving of the configuration  
21 input further comprises:

22 identifying, for an identified response-type Y element, whether a weighted  
23 statistical measure should be used, as opposed to a standard statistical measure.

1       45. (New) The method of claim 35 wherein the receiving of the configuration  
2       input further comprises:

3               allowing a user to customize specifications that aid in determining which  
4       response-type X elements are significant as compared to other response-type X elements.

5  
6       46. (New) The method of claim 35 further comprising, via the configuration and  
7       control display mechanism, providing an instruction to derive a transfer function based  
8       on the results of the statistical analysis.

9  
10      47. (New) The method of claim 35 further comprising presenting the generated  
11       results in a tabular-type presentation, the tabular-type presentation showing main effects  
12       and higher-order effects.

13  
14      48. (New) The method of claim 35 further comprising presenting the generated  
15       results in a graphical-type presentation, the graphical-type presentation showing main  
16       effects and higher-order effects.

17  
18      49. (New) A computer readable storage medium tangibly embodying program  
19       instructions which implement the method of claim 35.